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AUTHOR Hakuta, Kenji

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ABSTRACT

The idea that bilingualism causes cognitive damage to children is no longer held by researchers, but it lingers in popular belief. It is based on the assumption that language is central to cognitive development, which is not held by all theorists. Another theoretical issue is whether the mind is a limited-capacity container or can accommodate two languages with ease. Social concerns arising from cases of poor acculturation have also influenced research on bilingualism. More recent research has compared the performance of "real" bilingual children, those with roughly equal language skills, with that of monolingual children and found the former group to have superior performance, especially in metalinguistic ability. There is now data suggesting that even language minority students in bilingual education programs who are in the process of learning English can benefit from some of the advantages of bilingualism. These studies contradict the argument that bilingualism in itself might cause cognitive confusion in the child, and support the idea that bilingualism can lead to higher levels of metalinguistic awareness and cognitive ability. In general, they point to the benefits to children of all language backgrounds of learning and maintaining two languages. (MSE)

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COGNITIVE DEVELOPMENT OF BILINGUAL CHILDREN

Kenji Hakuta

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For further information contact:

Amado M. Padilla, Director
Center for Language Education and Research
1100 Glendon Avenue, Suite #1740
Los Angeles, CA 90024

There are many myths about the negative effects of early bilingualism on the mental development of children. Some educators have cautioned against the use of two languages in children, claiming that bilingualism causes cognitive, social and emotional damage to children. Although few scholars today would claim that bilingualism causes cognitive damage to children, this view has been advocated in the past, and can still be occasionally witnessed in popular magazine articles. It is also the personal experience of this writer that this belief lingers in the American soul, if casual dinner party conversations are any indication.

This topic should be of great concern to those interested in foreign language education and to practitioners of bilingual education as well. Any decision about the soundness of pedagogical approaches involving two languages should be informed by the research base on the issues of bilingualism and cognitive development.

Theoretical Issues

Of fundamental importance in conceptualizing this area of research are the theoretical tensions concerning the development of language and thought. The claim that bilingualism would have any effect on cognitive ability, be it positive or negative, is based on the assumption that language is a central part of cognitive activity. However, the influential developmental theory of Jean Piaget, for example, places a minimal role on language in cognitive development, and therefore Piaget's theoretical approach would maintain that bilingualism should have no effect on cognition. On the other hand, theorists such as Lev S. Vygotsky emphasize the importance of language in guiding thought processes, so according to this theory bilingualism can affect cognitive processes.

Another related theoretical tension is the question of whether or not the mind should be thought of as a "limited capacity container." The claim that bilingualism can cause a cognitive slowdown is based on the assumption that there is only so much information that can be processed by the child at any given time, and therefore attempting to learn two languages would, so to speak, blow some cognitive fuses. Theoretical issues such as these continue to be debated in the behavioral sciences, and their outcomes have influenced, and will continue to influence, the research on bilingualism and cognitive ability.

Historical Background

In addition to theoretical concerns, there have been societal concerns influencing research on bilingualism that need to be briefly mentioned. Indeed, the literature on the negative consequences of bilingualism on mental development can actually be traced back to social concerns at the turn of this century about the quality of immigrants who happened to be bilingual. The debate in those days concerned not so much issues of mental development and psychology, but rather social issues concerning the new wave of immigrants from Southern and Eastern Europe that had begun in the late 19th century. Social scientists and educators reflected the concern of the public that these new immigrants were not adapting well into mainstream American society. As evidence they pointed to the fact that the new immigrants were performing poorly on IQ tests, and that their children were doing poorly in the schools, again as reflected in standardized testing.

Two opposing camps of psychologists attempted explanations of the cause of this adjustment failure. They are essentially the same two camps

who are still debating the determinants of IQ, even though the tests themselves have changed considerably since those early days. The hereditarians believed that IQ is determined primarily through heredity, and therefore could not be modified by experience. The environmentalists, on the other hand, believed that IQ could be developed through experience. A factor that came to play a central role in this debate was bilingualism, where a bilingual individual is not necessarily one proficient in two languages, but rather one who comes from a language background other than English and is proficient in English to varying degrees.

The hereditarians argued that bilingualism was not a factor in the low IQ scores. The environmentalists, in contrast, argued for the position that the bilingual experience delayed the mental development of children. This was consistent with the then-prevalent views of development that stressed the role of experience in learning in children. Ironically, neither camp was willing to admit that perhaps IQ tests administered in English simply were not a good measure of intelligence for people who were not comfortable in English. A legacy of this early research is the view that bilingualism causes cognitive retardation.

Research with "Real" Bilinguals

More recent studies of bilinguals, a tradition begun by Elizabeth Peal and Wallace Lambert at McGill University in Montreal, Canada, have tended to look at what would be considered "real" bilingualism in children. These studies select for study only children who are roughly equal in their abilities in two languages. In these studies, a variety of mental performances are measured, often of the same types of abilities as those measured in IQ tests. The results of these studies indicate that

when these children are compared with a group of monolingual children (with equivalent socioeconomic backgrounds), the bilingual children perform better. These results have been replicated in over 30 studies in different cultural settings.

Among the abilities in which bilingual children seem to be superior, of particular interest to the educator is a skill that has been called *metalinguistic ability*. This mouthful of a term refers to the ability to think flexibly and abstractly about language (in adults, this can be seen, for example, in poetry where language must be carefully controlled and chosen to fit the governing "rules"). In children, this can be seen in the ability to make judgments about the grammar of sentences and to appreciate plays on words in jokes. The theory is that while all children, both monolingual and bilingual, develop metalinguistic ability, the bilingual experience attunes the child to better control their mental processes. In the research literature with monolingual children, metalinguistic ability has been linked with the development of early reading skills. By extension, it follows that bilingual children should, all other things being equal, have an edge in learning the basics of reading.

Research with Students in Bilingual Education Programs

There is now data to suggest that even language minority students in bilingual education programs who are in the process of learning English can benefit from some of the cognitive advantages of bilingualism. In one study conducted with Puerto Rican elementary school students in New Haven, the students who became more bilingual also showed superior metalinguistic ability in their native language as well as in nonverbal intelligence.

This relationship was found even though the students were in the bilingual education program, and therefore had not yet attained a very high degree of bilingualism.

Educational Implications

These studies should allay the common fear that bilingualism per se might cause cognitive confusion on the part of the child. If anything, bilingualism can lead to higher levels of metalinguistic awareness and cognitive ability. Currently, researchers are working on the question of specifying the exact ways in which the bilingual experience can lead to cognitive gains. In general, they point to the benefits of the learning and maintenance of two languages by children of all language backgrounds. In the case of children from homes where a non-English language is spoken, this can take the form of programmatic and/or individual efforts to maintain the native language while the children acquire English. In the case of native English-speaking children, this would translate into an aggressive program of foreign language instruction. In both cases, the result would be a better appreciation of language, enhanced cognitive ability, and all of the cultural and economic benefits to be derived from true bilingualism.

Additional Readings

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Kenji Hakuta (Ph.D. in Experimental Psychology, Harvard University, 1979) is Associate Professor of Psychology at Yale University. He is on the staff of CLEAR, through which he conducts research with the bilingual education program in the New Haven Public Schools. His research interests are in language and cognitive development, especially as they relate to the education of language minority children.